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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,353	12/21/2000	Kenneth R. Black	10839-31939	2485
7590 11/05/2004 DARBY & DARBY P.C. 805 THIRD AVENUE NEW YORK, NY 10022			EXAMINER KLINGER, SCOTT M	
			ART UNIT	PAPER NUMBER

2153

DATE MAILED: 11/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/747,353

Applicant(s)

BLACK ET AL.

Examiner

Scott M. Klinger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 26 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-6 and 8-11 are pending. Claim 7 has been cancelled.

Response to Arguments

Note: Applicant's remarks are in **bold** text. Examiner's responses are indented.

... Reisman does not disclose a distributed application as recited by claim 1 ... If the data sources are independently operated they are not part of a single distributed application as required by claim 1 ... Reisman does not disclose middleware, because he does not disclose a distributed system ...

Although the term "middleware" can be used to describe software that mediates between an application program and a network, it can also be used to describe any software that mediates between two application programs. Because the original claim 1 didn't have the limitation of a distributed application (which it has been amended to include) it was unclear as to which definition would be more likely.

... Reisman does not disclose transport protocols, as recited by claim 1 ... Reisman teaches the handling of application protocols, not transport protocols. Thus, when Reisman states that "modules 88 mimic the online services protocols" (col. 24, lines 53-54) it is referring to application protocols. This is the case because the online services are end user applications, and not communications utilities (see col. 2, lines 20-67) ...

The limitation of the protocols being transport protocols was not originally in claim 1. It should also be noted that the amended claim 1 does not include the limitation of adding support for communication protocols to middleware.

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...Ben-Shachar does not disclose adding support for communication protocols to middleware without accessing the source code of the middleware ... it should be noted that the term “plug-in”, the “CGI, NSAPI, ISAPI plug-in[s]” (col. 9, line 29) are not comparable to the transport protocols or connection bridge of claim 1 ...

The limitation of the protocols being transport protocols was not originally in claim 1. It should also be noted that the amended claim 1 does not include the limitation of adding support for communication protocols to middleware.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Maffeis (U. S. Patent Number 6,721,779, hereinafter “Maffeis”). Maffeis discloses a messaging proxy system. Maffeis shows,

In referring to claim 1,

- Providing a first computer executing middleware and one or more transport protocols:
Maffeis Fig.1 shows, a first computer 3 executing JMS middleware software and one or more transport protocols

"state of the art JMS messaging middleware products support communication protocols such as TCP/IP, HTTP, and SSL" (Maffeis, col. 1, lines 46-48)

- Providing a first computer and first application software, the first application software being part of the distributed application; providing a second computer executing second application software, the second application software being part of the distributed application:

"Another object of the invention is to provide a method for delivering data between an application serving as client and running on a mobile wireless device and an application running on a computer of a wired network." (Maffeis, col. 1, lines 59-62)

- Providing a connection bridge for communicating between the one or more transport protocols and the middleware of the first computer:

A connection bridge between the middleware and the transport layer is inherently implied in a system in which the middleware communicates with the transport layer

- As a result of communication between the first application software and the second application software, generating an action request by at least one transport protocol of the one or more transport protocols, the action request including a protocol connection identifier; notifying said middleware that an action request is ready to have an action performed; and transferring said protocol connection identifier to said middleware:

JMS messaging middleware communicating over a TCP/IP network inherently implies queuing action requests with protocol connection identifiers

In referring to claim 4,

- Said connection bridge further communicates with existing internally supported transport protocols of the middleware:

Maffeis Fig. 1 shows the middleware communicates over TCP/IP networks, which is internally supported by the middleware: *Maffeis, col. 1, lines 46-48* (see full quote above)

Claims 1, 4-6, and 8-10, as understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Ben-Shachar et al. (U.S. Patent Number 6,209,018, hereinafter "Ben-Shachar"). Ben-Shachar discloses a service framework for a distributed object network system. Ben-Shachar shows:

In referring to claim 1,

- Providing a first computer executing middleware, one or more transport protocols and first application software, the first application software being part of the distributed application; providing a second computer executing second application software, the second application software being part of the distributed application:

"For example, a web browser in the client 80 dispatches an HTTP request to the web server which launches a CGI, NSAPI, or ISAPI plug-in that is a client to the application server (e.g., the server 88). In particular, the plug-in represents a CORBA client that issues a call to the service locator 84 to locate an appropriate service (e.g., a web service). Thus, the application server may be completely isolated from the web server. The plug-in then dispatches the web event to the web service. The application server may provide a service implemented using CORBA objects that are activated (i.e., instantiated) prior to the incoming call for the service provided by the application server. The web service executes the application logic, interacts with one or more data services in the application server, and stores session and state information. The web service returns the result of the web event which is an HTML page back to the web browser in the client 80."
(Ben-Shachar, col. 9, lines 27-43)

- Providing a connection bridge for communicating between the one or more transport protocols and the middleware of the first computer:

A connection bridge between the middleware and the transport layer is inherently implied in a system in which the middleware communicates with the transport layer

- As a result of communication between the first application software and the second application software, generating an action request by at least one transport protocol of the

one or more transport protocols, and notifying said middleware that an action request is ready to have an action performed:

Ben-Shachar, col. 9, lines 27-43 (see full quote above)

- The action request including a protocol connection identifier; transferring said protocol connection identifier to said middleware:

Middleware communicating over a TCP/IP network inherently implies protocol connection identifiers

In referring to claim 4,

- Said connection bridge further communicates with existing internally supported transport protocols of the middleware:

Ben-Shachar, Fig. 3 shows the client communicates to a server which inherently implies using the internally supported transport protocols of the middleware

In referring to claim 5,

- Performing said steps in an object-oriented programming language:

"In some embodiments, the service framework 76 is implemented as a collection of objects written in JAVA and C++, and the architecture of the service framework 76 is the definition of the collection of objects and the interaction among objects in the collection. In some embodiments, the service framework 76 supports services implemented using C++, JAVA, etc." (Ben-Shachar, col. 5, lines 49-55)

In referring to claim 6,

- Implementing said connection bridge by utilizing a synchronization primitive and FIFO queue:

"Accordingly, FIG. 4 illustrates the advantages of providing a service proxy that encapsulates the process of requesting a service. For example, the service proxy implements fault tolerance. In particular, if a client requests a service (e.g., in a wait

mode as described further below with respect to FIG. 9) and there are no available workers for the service, the service proxy can request access to a worker for the service and the request is queued (e.g., in a first in, first out (FIFO) queue).” (Ben-Shachar, col. 11, lines 49-57)

In referring to claim 8,

- The communication between the first application software and the second application software comprises executable code:

Application software inherently implies executable code

In referring to claim 9,

- The communication between the first application software and the second application software further comprises an invocation of an object residing at the second computer by the first application software and the sending of the object to the first application software by the second application software:

“Generally, in order to access a service, a client must obtain a handle (e.g., an object reference) to a particular service object for the service on which the client intends to execute an operation (a service request). In some embodiments, the service framework includes an object (e.g., a CORBA object) called a service locator that maintains the name space of service instances.” (Ben-Shachar, col. 5, line 60 – col. 6, line 9)

In referring to claim 10,

- The first application software is a client software and the second application software is a server software:

Ben-Shachar, Fig. 3 shows the first application software resides on client 80 and the second application software resides on server 88

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maffeis.

In referring to claim 2, Maffeis shows substantial features of the claimed invention, including:

- The system of claim 1 (see 102 rejection above)
- At least one transport protocol is such that the middleware is not configured to directly communicate with said at least one transport protocol:

"The message proxy 1 comprises at least one pluggable transport protocol adapter. FIG. 1 shows an example of six specific wireless transport protocol adapters (WAP 1a, UMTS 1b, HTTP 1c, DAB/GSM Data 1d, SMS 1e, GPRS 1f). Any number of additional wireless protocol adapters 1g can be present. Pluggable protocol adapters allow the message proxy to send and receive messages to and from message clients using arbitrary wireless protocols." (Maffeis, col. 3, lines 5-12)

However, Maffeis does not show the unsupported protocols are received at the first computer. Nonetheless this feature is well known in the art and would have been an obvious modification to the system disclosed by Maffeis.

A person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Maffeis so as to combine the proxy server with the messaging server, in order to decrease the response time of the messaging system and overcome the speed limitations of the TCP/IP network between the proxy and the middleware system.

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In referring to claim 3, Maffeis shows substantial features of the claimed invention, including:

- The system of claim 1 (see 102 rejection above)
- Said connection bridge further communicates with multiple protocol instances and different types of protocols:

Maffeis Fig. 1 shows multiple protocol instances and different types of protocols

However, Maffeis does not show the unsupported protocols are received at the first computer. Nonetheless this feature is well known in the art and would have been an obvious modification to the system disclosed by Maffeis.

A person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Maffeis so as to combine the proxy server with the messaging server, in order to decrease the response time of the messaging system and overcome the speed limitations of the TCP/IP network between the proxy and the middleware system.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Shachar. Although Ben-Shachar shows substantial features of the claimed invention, Ben-Shachar does not show the second computer is an embedded computer. Nonetheless this feature is well known in the art and would have been an obvious implementation of the system disclosed by Ben-Shachar.

A person of ordinary skill in the art would have readily recognized the desirability and advantages of implementing the system of Ben-Shachar so as to use an embedded server, in order to lower the cost and size of the application specific server system.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

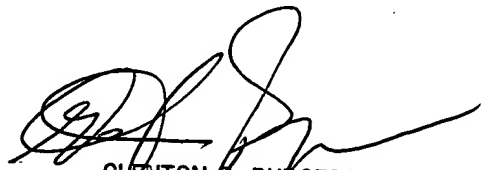
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott M. Klinger whose telephone number is (703) 305-8285. The examiner can normally be reached on M-F 7:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Scott M. Klinger
Examiner
Art Unit 2153

smk



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